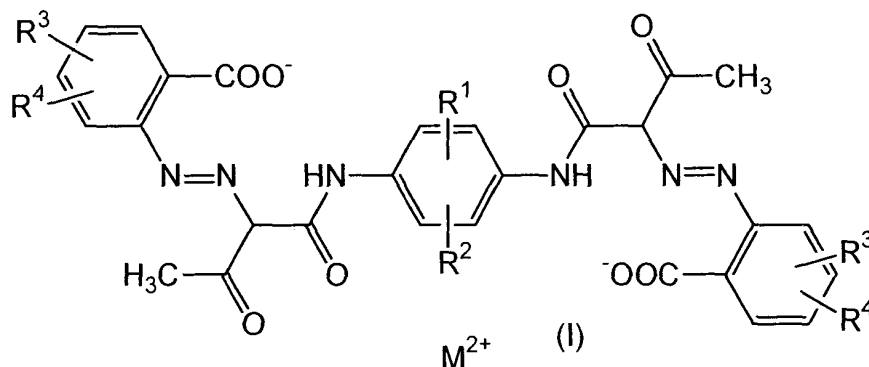


## CLAIMS

What is claimed is:

1. A green shade yellow pigment represented by Formula I:



wherein R<sup>1</sup> and R<sup>2</sup> are independently selected from hydrogen, hydroxy, halogen, an alkyl group having 1 to about 4 carbon atoms, an alkoxy group having 1 to about 4 carbon atoms, a halo-alkyl group containing 1 to about 4 carbon atoms, an alkoxy carbonyl group having 1 to about 5 carbon atoms; R<sup>3</sup> and R<sup>4</sup> are independently selected from hydrogen, hydroxy, halogen, an alkyl group containing from 1 to about 4 carbon atoms, an alkoxy group containing from 1 to about 4 carbon atoms, and halo-alkyl groups containing from 1 to about 4 carbon atoms; and M is at least one divalent metal.

2. The green shade yellow pigment according to claim 1, wherein M is at least one of barium, calcium, magnesium, strontium, manganese, nickel, and zinc.

3. The green shade yellow pigment according to claim 1, R<sup>1</sup> and R<sup>2</sup> are independently selected from hydrogen, chloro, an alkyl group having 1 to about 2 carbon atoms, an alkoxy group having 1 to about 2 carbon atoms, a

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halo-alkyl group containing 1 to about 2 carbon atoms, and an alkoxy carbonyl group having 1 to about 3 carbon atoms; and  $R^3$  and  $R^4$  are independently selected from hydrogen, chloro, an alkyl group containing from 1 to about 3 carbon atoms, an alkoxy group containing from 1 to about 2 carbon atoms, and fluoro-alkyl groups containing from 1 to about 2 carbon atoms.

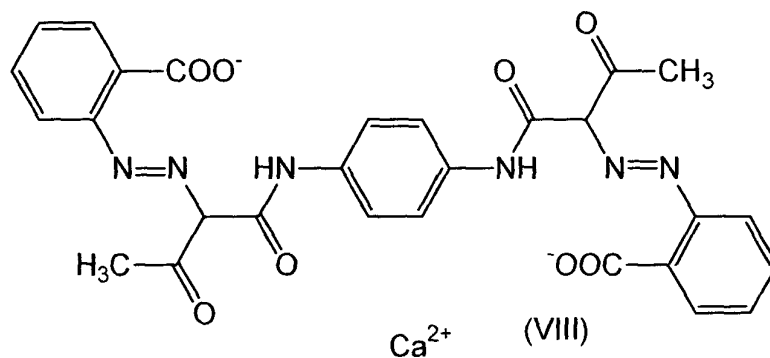
4. The green shade yellow pigment according to claim 1, wherein at least one of  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are halogen.

5. The green shade yellow pigment according to claim 1, wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are hydrogen.

6. The green shade yellow pigment according to claim 1, wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are the same.

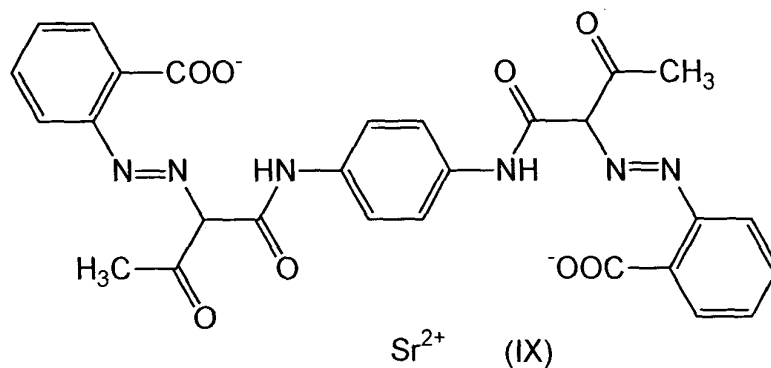
7. The green shade yellow pigment according to claim 1, wherein at least two of  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are hydrogen.

8. A green shade yellow pigment represented by Formula VIII:



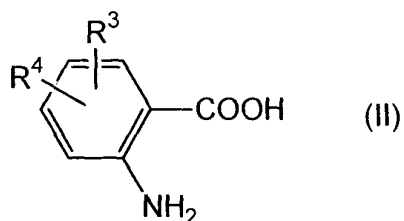
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9. A green shade yellow pigment represented by Formula IX:



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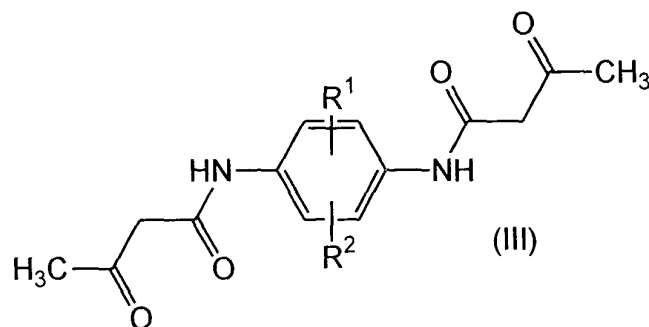
10. A method of making a green shade yellow pigment, comprising:  
coupling a diazonium component comprising a compound prepared  
from an aromatic amine represented by Formula II



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wherein  $\text{R}^3$  and  $\text{R}^4$  are independently selected from hydrogen, hydroxy, halogen,  
an alkyl group containing from 1 to about 4 carbon atoms, an alkoxy group  
containing from 1 to about 4 carbon atoms, and halo-alkyl groups containing from  
1 to about 4 carbon atoms with a coupling component comprising a coupler  
represented by Formula III

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wherein  $R^1$  and  $R^2$  are independently selected from hydrogen, hydroxy, halogen,  
 an alkyl group having 1 to about 4 carbon atoms, an alkoxy group having 1 to  
 5 about 4 carbon atoms, a halo-alkyl group containing 1 to about 4 carbon atoms,  
 an alkoxy carbonyl group having 1 to about 5 carbon atoms; and  
 metallizing with a divalent salt.

11. The method according to claim 10, wherein at least one of coupling  
 10 and metallizing is effected in the presence of a surfactant.

12. The method according to claim 10, wherein the divalent salt  
 comprises at least one of  $\text{CaCl}_2$ ,  $\text{CaBr}_2$ ,  $\text{CaF}_2$ ,  $\text{Ca}(\text{NO}_3)_2$ ,  $\text{MgCl}_2$ ,  $\text{MgBr}_2$ ,  $\text{MgF}_2$ ,  
 $\text{Mg}(\text{NO}_3)_2$ ,  $\text{MgSO}_4$ ,  $\text{SrCl}_2$ ,  $\text{SrBr}_2$ ,  $\text{SrF}_2$ ,  $\text{Sr}(\text{NO}_3)_2$ ,  $\text{BaCl}_2$ ,  $\text{BaBr}_2$ ,  $\text{BaF}_2$ ,  $\text{Ba}(\text{NO}_3)_2$ ,  
 15  $\text{MnCl}_2$ ,  $\text{MnBr}_2$ ,  $\text{MnF}_2$ ,  $\text{Mn}(\text{NO}_3)_2$ ,  $\text{MnSO}_4$ ,  $\text{NiCl}_2$ ,  $\text{NiBr}_2$ ,  $\text{Ni}(\text{NO}_3)_2$ ,  $\text{NiSO}_4$ ,  $\text{ZnCl}_2$ ,  
 $\text{ZnBr}_2$ ,  $\text{ZnF}_2$ ,  $\text{Zn}(\text{NO}_3)_2$ , and  $\text{ZnSO}_4$ .

13. The method according to claim 10, wherein coupling effected at a  
 temperature from about  $-20$  to about  $80^\circ\text{C}$ . and at a pH of about 4 or more and  
 20 about 12 or less.

14. The method according to claim 10, wherein coupling is effected at a  
 temperature from about  $0$  to about  $70^\circ\text{C}$ . and at a pH of about 5 or more and

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about 11 or less.

15. The method according to claim 10, wherein a ratio of equivalents for coupling of the diazonium component to the coupling component is from about 1.7:2 to about 2.1:2.

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16. The method according to claim 10, further comprising heating for about 0.25 to about 3 hours at temperatures about 100 °C. or higher.

10 17. The method according to claim 10, wherein the aromatic amine comprises at least one of 2-aminobenzoic acid; 2-amino-3-methylbenzoic acid; 2-amino-5-methylbenzoic acid; 2-amino-6-methylbenzoic acid; 2-amino-3-methoxybenzoic acid; 2-amino-3-hydroxybenzoic acid; 2-amino-3-chlorobenzoic acid; 2-amino-4-chlorobenzoic acid; 2-amino-5-chlorobenzoic acid; 2-amino-6-chlorobenzoic acid; 2-amino-5-bromobenzoic acid; 2-amino-4-fluorobenzoic acid; 15 2-amino-5-fluorobenzoic acid; 2-amino-6-fluorobenzoic acid; 2-amino-4,5-dimethoxybenzoic acid; 2-amino-3,5-diiodobenzoic acid; 2-amino-4,5-difluorobenzoic acid; 2-amino-3,5-dichlorobenzoic acid; and salts thereof.

20 18. The method according to claim 10, wherein the coupler comprises at least one of 1,4-bis(acetoacetamido)benzene; 2-chloro-1,4-bis(acetoacetamido)benzene; 2-bromo-1,4-bis(acetoacetamido)benzene; 2-trifluoromethyl 1,4-bis(acetoacetamido)benzene; 2,6-bis-trifluoromethyl 1,4-bis(acetoacetamido)benzene; 2-methoxycarbonyl-1,4-bis(acetoacetamido)benzene; 2-ethoxycarbonyl 1,4-bis(acetoacetamido)benzene; 2,5-diethoxycarbonyl-1,4-bis(acetoacetamido)benzene; 2-cyano-1,4-bis(acetoacetamido)benzene; 2-methyl-1,4-bis(acetoacetamido)benzene; 2-methoxy-1,4-bis(acetoacetamido)benzene; 2-ethyl-1,4-bis(acetoacetamido)benzene; 2-ethoxy-1,4-bis(acetoacetamido)benzene; 2-propoxy-1,4-

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bis(acetoacetamido)benzene; 2-isopropoxy-1,4-bis(acetoacetamido)benzene; 2-butoxy-1,4-bis(acetoacetamido)benzene; 2-phenoxy-1,4-bis(acetoacetamido)benzene; 2-nitro-1,4-bis(acetoacetamido)benzene; 2,5-dimethoxy-1,4-bis(acetoacetamido)benzene; 2,5-diethoxy-1,4-bis(acetoacetamido)benzene; 2-ethoxy-5-methoxy-1,4-bis(acetoacetamido)benzene; 2,5-dichloro-1,4-bis(acetoacetamido)benzene; 2,3-dichloro-1,4-bis(acetoacetamido)benzene; 2,6-dichloro-1,4-bis(acetoacetamido)benzene; 2,5-dibromo-1,4-bis(acetoacetamido)benzene; 2,6-dibromo-1,4-bis(acetoacetamido)benzene; 2-chloro-5-methoxy-1,4-bis(acetoacetamido)benzene; 2-chloro-5-ethoxy-1,4-bis(acetoacetamido)benzene; 2-chloro-5-methyl-1,4-bis(acetoacetamido)benzene; 2,5-dimethyl-1,4-bis(acetoacetamido)benzene; 2-methyl-5-methoxy-1,4-bis(acetoacetamido)benzene; 2-methyl-5-ethoxy-1,4-bis(acetoacetamido)benzene; 2-methyl-5-propoxy-1,4-bis(acetoacetamido)benzene; 2-methyl-5-isopropoxy-1,4-bis(acetoacetamido)benzene; and 2-methyl-5-butoxy-1,4-bis(acetoacetamido)benzene.

19. The method according to claim 10, wherein the aromatic amine comprises a supplemental amine not represented by Formula II.

20. The method according to claim 10, wherein the coupler comprises a supplemental coupler comprising at least one of hydroxynaphthalenesulfonic acid couplers, pyrazolone couplers, and acetoacetanilide couplers.

21. A plastic composition comprising a major amount of a plastic and a minor amount of the green shade yellow pigment according to claim 1.

22. The plastic composition according to claim 21, wherein the plastic

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comprises at least one selected from the group consisting of polystyrene, polyolefins, polyacrylic compounds, polyvinyl compounds, polyesters, filaments made of viscose and cellulose ethers, cellulose esters, polyamides, polyurethanes, polycarbonates, polyimides, and polyacrylonitrile.

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23. A plastic composition comprising a major amount of a plastic and a minor amount of the green shade yellow pigment composition according to claim 8.

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24. A plastic composition comprising a major amount of a plastic and a minor amount of the green shade yellow pigment composition according to claim 9.

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25. A plastic composition comprising a major amount of a plastic and a minor amount of the green shade yellow pigment composition made according to claim 10.

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26. A coating composition comprising a major amount of a coating vehicle and a minor amount of the green shade yellow pigment according to claim 1.

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27. A coating composition comprising a major amount of a coating vehicle and a minor amount of the green shade yellow pigment composition made according to claim 10.

28. An ink composition comprising a major amount of an ink vehicle and a minor amount of the green shade yellow pigment according to claim 1.

29. An electrostatic toner composition comprising a major amount of an

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electrostatic toner and a minor amount of the green shade yellow pigment according to claim 1.